REMARKS

Reconsideration of this application is respectfully requested in view of the foregoing amendment and the following remarks.

Applicants have amended Claims 18-19 to overcome the rejection under 35 U.S.C. § 112. Favorable reconsideration is respectfully solicited.

Claims 1-17 and 22-34 stand rejected under 35 U.S.C. § 102(b) as being anticipated by Shinotsuka et al. (U.S. 6,191,408). In addition, Claims 35-36 stand rejected under 35 U.S.C. § 103(a) as being obvious in view of Shinotsuka et al.

The present invention is directed to a method and a device for the correction of fixed pattern noise in image signals generated by a plurality of image cells of an image sensor, and to a digital camera incorporating such a device.

Shinotsuka is also directed to the correction of fixed pattern noise in the image signals of image cells or pixels of an image sensor. As can be seen from the diagram in Fig. 3, Shinotsuka specifically deals with an image sensor having image cells which have two different transfer characteristics depending on the instantaneous values of the impinging light. For very low intensities of light, the image cells have a linear transfer characteristic which appears curved as a result of the logarithmic scale on the abscissa. For higher values of incident light, the image cells have a logarithmic transfer function which results in an approximately linear characteristic across the logarithmic abscissa. Shinotsuka teaches a method and a device which are configured to correct the output values of each individual image cell in such a way that the individual sensor outputs of the image cells have an output characteristic curve identical to the reference output characteristic curve shown in Fig. 3 (Column 11, line 65 to Column 12, line 5).

However, Shinotsuka fails to teach or suggest an approximation characteristic that has a section of a parabola for at least one value range, as defined in amended Claims 1 and 34. In contrast, Shinotsuka proposes two value ranges, one with a linear characteristic and one with a logarithmic characteristic.

Regarding the recitation in Claim 1 relating to the characteristic including a section of a parabola, the Examiner refers to Fig. 3 and 9 of Shinotsuka, and in particular to the logarithmic function region. It is respectfully submitted, however, that a parabola is different from a logarithmic function. A parabola and a logarithmic function are mathematically distinct. Although the respective graphs of these functions may have some similarities if drawn appropriately, the curves are nevertheless different. It is respectfully submitted that amended Claims 1 and 34, which specifically define a section of a parabola for at least one value range, are not anticipated by, nor rendered obvious in view of, Shinotsuka.

In addition, Shinotsuka fails to teach or suggest approximation characteristics for correcting actual image values, wherein said approximation characteristics have at least two value ranges which are specified such that the characteristics are approximately linear with respect to the logarithm of the optical intensity within the respective value ranges, as defined by amended Claim 6. To the contrary, Shinotsuka teaches one linear and one logarithmic curve, while the method and the device of amended Claims 6 and 26 define logarithmic characteristics (linear with respect to the logarithm) for each value range. Accordingly, the method and the device of amended Claims 6 and 26 are novel and not rendered obvious in view of Shinotsuka.

Accordingly, pending Claims 1-7, 9-14, 16, 18-26, 28-34 and 36 are believed to be in condition for allowance. Favorable reconsideration is respectfully solicited.

Respectfully submitted,

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